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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/825,310

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Shinichi Konishi

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03/27/2006

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EXAMINER

CHU, KIM KWOK

ART UNIT

PAPER NUMBER

2627

DATE MAILED: 03/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/825,310	Applicant(s) KONISHI ET AL.	
	Examiner Kim-Kwok CHU	Art Unit 2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-7 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/16/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/537,869.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Claim Objections

1. Claim 7 is objected to because of the following informalities:

(a) in claim 7, line 2, the term "stores the aberration detected based on" should be changed to --stores the detected aberration based on--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

*A person shall be entitled to a patent unless --
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.*

3. Claims 1, 2 and 4-7 are rejected under 35 U.S.C. § 102(b) as being anticipated by Edahiro et al. (U.S. Patent 5,253,239).

Edahiro teaches an optical disk apparatus having all of the elements and means as recited in claims 1, 2 and 4-7. For example, Edahiro teaches the following:

(a) as in claim 1, the optical disk apparatus is for recording and reproducing information to and from an optical disk 1 (Fig. 1);

(b) as in claim 1, an optical pickup 6 irradiating light beam onto optical disk 1 surface for recording and reproducing

the information to generate an analogue reproduction signal (Figs. 1 and 2; analogue signal such as a tracking error signal);

(c) as in claim 1, an A/D converter 41 for converting the analogue reproduction signal into a digital form (Fig. 7);

(d) as in claim 1, an adaptive equalizer 32 receiving the digital reproduction signal from the A/D converter 41 and adaptively renewing a plurality of tap coefficients of a FIR filter (Fig. 7; column 6, lines 1-13);

(e) as in claim 1, an aberration (tilt/tracking error) control apparatus 33 for controlling minimize an aberration contained in spot of light beam irradiated from the optical pickup onto the optical disk 1 (Fig. 3; column 2, lines 1-11);

(f) as in claim 1, the aberration control apparatus 33 comprises an aberration detector 23 detecting the aberration light beam spot using the tap coefficients of the adaptive equalizer 32 and generating an aberration detection signal in accordance with the detected aberration (Figs. 3 and 7; disk controller 33 controls the tilting and includes a tracking detector 23);

(g) as in claim 1, an aberration correcting unit 32 for correcting the aberration of the light beam spot (Fig. 3);

(h) as in claim 11, a correction control unit 36 for controlling the aberration correction of the aberration

correcting unit 36 in accordance with the aberration detection signal to minimize the aberration of the light beam spot (Figs. 3 and 7; tracking actuator tracks designated track without tilting);

(i) as in claim 2, the aberration detector 32 detects the aberration by comparing at least one pair of the tap coefficients symmetrical with respect to center position time delay order (Fig. 7; column 6, lines 37-40);

(j) as in claim 4, the optical disk recordable reproducible disk 1 having format including a prepit address (header) region and an information recording region and the aberration control executed accordance the aberration detected based the tap obtained by equalization learning of the reproduction signal read out the prepit address region when information recorded and reproduced (Fig. 3; tracking is reading address in a prepit/header region);

(k) as in claim 5, the learning (adaptive) result the reproduction signal read out of the prepit address region is previously obtained and stored storage portion (memory) 43 when the information is recorded optical disk (Figs. 3 and 7);

(l) as in claim 6, the aberration detected based on the tap coefficients is previously stored in a temporary storage portion 43 and the stored aberration is used conduct the aberration control (Fig. 7); and

(m) as in claim 7, the correction control unit 36 stores the detected aberration based on the equalization learning result of the reproduction signal read of optional one track and stored aberration used conduct the aberration control (Figs. 3, 7 and 10; proper tracking is obtained based on the tilt/total reflect signal

Allowable Subject Matter

4. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

As in claim 3, the prior art of record fails to teach or fairly suggest an information recording apparatus having the following features:

(a) the number of the plurality of tap coefficients odd in time delay order, and the correction control unit controls the aberration correction of the aberration correcting unit in a manner that least a pair symmetrical tap coefficients are substantially made coincident with each other.

The features indicated above, in combination with the

other elements of the claims, are not anticipated by, nor made obvious over, the prior art of record.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yoshimura (5,546,367) is pertinent because Yoshimura teaches an adaptive equalizer for recording information.

7. Any response to this action should be mailed to:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Or faxed to:

(571) 273-8300 (for formal communications intended for entry. Or:

(571) 273-7585, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Any inquiry of a general nature or relating to the status of this application should be directed USPTO Contact Center (703) 308-4357; Electronic Business Center (703) 305-3028.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim CHU whose telephone number is (571) 272-7585 between 9:30 am to 6:00 pm, Monday to Friday.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kim-Kwok CHU
Examiner AU2653

Kc 3/20/06
March 20, 2006
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